

WHAT IS CLAIMED IS:

1. A system for managing recognition errors in a multiple dialog state environment comprising:
  - an error management module having a global error
  - 5 counter, a global error set point, a first dialog state error counter, a first dialog state error set point, a second dialog state error counter, a second dialog state error set point, a third dialog state error counter, and a third dialog state error set point;
  - 10 a first dialog state module operable to interact with a user to perform at least one interaction task;
  - a second dialog state module operable to interact with a user to perform at least one interaction task;
  - a third dialog state module operable to interact
  - 15 with a user to perform at least one interaction task;
  - each dialog state module further operable to:
    - determine whether the interaction task has been successfully completed or whether a recognition error has occurred;
    - 20 update the global error counter and the respective dialog counter if an error is detected;
    - direct the user to an agent if the global error counter equals the global error set point;
    - direct the user to a different dialog state if the
    - 25 respective dialog state error counter equals the respective dialog state error set point;
    - re-prompt the user to complete the interaction task if the respective dialog state error counter is less than the respective dialog state error set point; and

selectively directing the user to a subsequent interaction task after successful completion of the interaction task.

5           2.    The system of Claim 1 further comprising:  
              the first dialog state module operable to interact  
              with the user via a natural language dialog;  
              the second dialog state module operable to interact  
              with the user via a speech directed dialog; and  
10           the third dialog state module operable to interact  
              with the user via a touch tone dialog.

              3.    The system of Claim 2 further comprising:  
              the global error set point equal to at least one;  
15           the first dialog state error set point equal to at  
              least two;  
              the second dialog state error set point equal to at  
              least one; and  
              the third dialog state error set point equal to at  
20           least one.

4. A system for managing recognition errors in a multiple dialog state environment comprising:

an error management module having a global error counter and a global error set point;

5 the user interaction module in communication with the error management module and operable to interact with users to perform at least one interaction task, the user interaction module operable to interact with the user via at least two dialog states;

10 the user interaction module operable to determine whether an interaction task has been successfully completed or if a recognition error has occurred;

the user interaction module further operable to communicate the occurrence of a recognition error to the error management module; and

15 the user interaction module operable to determine whether to direct a user to an agent based upon the global error counter and the global error set point.

20 5. The system of Claim 4 further comprising the global error set point equal to at least one and the user interaction module directs the user to an agent if the global error counter is equal to the global error set point.

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6. The system of Claim 4 further comprising:

the error management module having a first dialog state error counter, a second dialog state error counter, a third dialog state error counter, a first dialog state

error set point; a second dialog state error set point  
and a third dialog state error set point;

the user interaction module operable to communicate  
the occurrence of a recognition error during use of a  
5 particular dialog state to the error management module.

7. The system of Claim 6 where the user  
interaction dialog further comprises:

a first dialog state module operable to interact  
10 with a user according to a natural language dialog state;  
a second dialog state module operable to interact  
with a user according to a speech directed dialog; and  
a third dialog state module operable to interact  
with a user via a touch tone dialog state.

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8. The system of Claim 7 further comprising:

the user interaction module operable to direct a  
user to the second dialog module to complete the  
interaction task after detecting a recognition error from  
20 the first dialog state module and determining that the  
first dialog state counter is equal to the first dialog  
state error set point.

9. The system of Claim 7 further comprising the  
25 user interaction module operable to direct a user to the  
third dialog module to complete the interaction task  
after detecting a recognition error resulting from the  
second dialog state module and determining that the

second dialog state counter is equal to the second dialog state error set point.

10. The system of Claim 7 further comprising the  
5 user interaction module operable to direct a user to an agent to complete the interaction task after detecting a recognition error resulting from the third dialog state module and determining that the third dialog state counter is equal to the third dialog state error set  
10 point.

11. The system of Claim 7 further comprising the  
user interaction module operable to re-prompt the user to complete the interaction task using the last-used dialog  
15 state module after detecting a recognition error resulting from using the last-used dialog state module and determining that the respective dialog state counter is less than the respective dialog state error set point.

20 12. The system of Claim 6 further comprising the global error set point operable to be selectively changed based upon agent availability.

13. The system of Claim 7 further comprising the  
25 user interaction module operable to direct the user to a subsequent interaction task using the last-used dialog state after determining that the interaction task has been successfully completed.

14. An error management module for use with a communication system operable to support a multiple dialog state environment comprising:

5 a global error counter operable to record the total number of recognition errors experienced by the communication system during an interaction with a particular user;

a global error set point;

10 a first dialog state error counter operable to record the number of errors experienced by the communication system while using a first dialog state during an interaction with the particular user;

a first dialog state error set point; and

15 the error management module operable to provide the global error counter, the global error set point, the first dialog state error counter, and the first state error set point to the communication system for managing dialog state recognition errors.

20 15. The error management module of Claim 14 further comprising:

a third dialog state error counter operable to record the number of errors experienced by the communication system using a third dialog state during an  
25 interaction with the particular user; and

a third dialog state error set point.

16. The error management module of Claim 14 further comprising the global error counter, first dialog state error counter and second dialog state error counter operable to be selectively reset after completing an  
5 interaction with a user.

17. The error management module of Claim 14 further comprising the first dialog error counter and the second dialog error counter operable to be selectively reset  
10 after completing an interaction task and initiating a subsequent interaction task with the user.

18. A method for managing recognition errors in a multiple dialog state environment comprising:

setting a global error set point to a predefined value;

5 monitoring recognition errors within a multiple dialog state environment;

incrementally increasing a global error counter after a recognition error is detected; and

directing a user to an agent if the global error  
10 counter is equal to the global error set point.

19. The method of Claim 18 further comprising resetting the global error counter for each user.

15 20. The method of Claim 18 further comprising:  
providing at least one error set point associated with a selected dialog state;

providing an error counter associated with the selected dialog state;

20 monitoring recognition errors occurring within the selected dialog state;

incrementally increasing the error counter associated with the selected dialog state after a recognition error within the selected dialog state is

25 detected; and

directing a user to a different dialog state if the selected dialog error counter is equal to the selected error set point.